

KEH, Z.

Decree of the Minister of Heavy Industry, no.129 of July 26, 1961 regarding a closer cooperation between sections of the Ministry of Heavy Industry and technical associations united in the Chief Technical Organization. Przegl mech 20 no.18:571 S '61.

Immunology

BULGARIA

APPROVED FOR RELEASE: 06/13/2000

CIA-RDP86-00513R000721420009-6"

KEHAYOV, I., Laboratory of Cytoimmunology, Institute of Microbiology, Bulgarian Academy of Sciences

"Studies on Antigenic Relations Between Guinea Pig Kidney and Lung"

Sofia, Doklady Bolgarskoy Akademii Nauk, Vol 19, No 12, 1966, pp 1219-1222

Abstract: [English article] The treatment of guinea pigs with rabbit anti-guinea-pig-kidney serum raises the percentage of localization of the tuberculous infection in the kidney (I. R. Kechayov, P'rvii kongres na mikrobioloziite v B'lgariya, Izd. BAN, 1965). The same phenomenon was established, although to a lesser degree, in the treatment of guinea pigs with heterologic anti-lung serum, which may be ascribed to the existence of antigen(s) common to kidney and lungs. The present communication contains some results of further studies on the antigenic relationship between the guinea pig's kidney and lung. Following a brief description of the materials (young rabbits) and methods used, it gives a detailed description and discussion of the results. An analysis of the data indicates that the complement-fixation test and the agar-gel precipitation test disclose that the antigenic mosaic of the guinea pig lung contains an antigen(s) common to the kidney antigens. This antigenic kinship of the two organs is considered significant for the specific organotropism of the tuberculous infection. References: 2 Bulgarian, 1 Soviet, and 7 Western. (Manuscript received 7 Jul 66.)

KEHESY, A.

Color vision. Szemeszet 90 no.1:9-32 Feb 1953.

(CML 24:5)

1. Doctor Medical Sciences.

KEHISIAN, HENRY V.

General study of the protolytic equilibrium. I. The chemical equilibrium in aqueous solutions of a monobasic and a monoacidic base. Henry V. Kehisian. *Stud. chim. populare Romine, Studii chimice* 5: 34 (1955). Math. Based on 6 definitions and 4 assumptions, a general equation is derived for aq. solns. of a monobasic acid and a monoacidic base, from which special and approximation formulas of the literature may be derived.

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ROMANIA/Physical Chemistry - Solutions, Theory of Acids and Bases.

Abs Jour: Referat. Zhurnal Khimiya, No 2, 1958, 3935.

Author : Henry V. Kehisian.
Inst :

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000721420009-6"

Title : General Study of Protolytic Equilibrium. II. Chemical Equilibrium in Aqueous Solution of Acid and Base Mixture.

Orig Pub: Studii si cercetari chim., 1957, 5, No 1, 35-49.

Abstract: The equation of chemical equilibrium and its application to solutions of acids, bases and amphoteric substances (protolytes) was studied. The case of aqueous solutions produced by a mixture of polybasic acids and polybasic bases is discussed. The derived equation is a generalization of the equation derived earlier (part I, RZhKhim, 1956, 32081).

Card : 1/1

-7-

ROMANIA/Physical Chemistry - Solutions, Theory of Acids and Bases.

B-11

Abs Jour: Referat. Zhurnal Khimiya, No 2, 1958, 3936.

Author : Henry V. Kehisian.

Inst :

Title : Composition of Boric Acids and Alkali Borates in Aqueous Solutions. I. Appendix to General Study of Protolytic

KEHIAIAN, H.

Studies on the liquid--liquid equilibrium. Pts. 1-3. Biul chim PAN
10 no.10:569-589 '62.

1. Institute of Physical Chemistry, Polish Academy of Sciences, Warsaw.
Presented by W. Swietoslowski.

KEHIAIAN, H.

Thermodynamics of chemically reacting mixtures. Pts. 1-3.
Bul chim PAN 11 no.8:479-496 '63.

1. Institute of Physical Chemistry, Polish Academy of Sciences,
Warsaw. Presented by W. Swietoslowski.

KEHIAIAN, H.; SOSNOWSKA-KEHIAIAN, K.

Thermodynamics of chemically reacting mixtures. Pt.4. Bul
chim PAN 11 no.9:549-556 '63.

1. Institute of Physical Chemistry, Polish Academy of Sciences,
Warsaw. Presented by W. Swietoslowski.

KEHIAIAN, H.

Thermodynamics of chemically reacting mixtures. Pt. 7.
Bul chim PAN 12 no. 1:77-83 '64.

1. Institute of Physical Chemistry, Polish Academy of Sciences,
Warsaw. Presented by W. Swietoslowski.

KERSTIAN, H.; FLOJANS, A.

Thermodynamics of chemically reacting mixtures. Pt. 8. Bul chim
PAN 12 no.4:255-262 '64.

1. Institute of Physical Chemistry, Polish Academy of Sciences,
Warsaw. Presented by W. Swietoslowski.

PIBIAIAN, H.

Thermodynamics of chemically reacting mixtures. pt. 9. Bilichin
PAN 12 no.5:323-329 '64.

1. Institute of Physical Chemistry, Polish Academy of Sciences,
Warsaw. Presented by W. Swiatkowski.

KEBIATAN, H., SOSNKOWSKA-KEBIATAN, K.

Thermodynamics of chemically reacting systems. Part 10-11.
Bull. Chim. PAN 12 no.6:429-439 1964.

1. Institute of Physical Chemistry of the Polish Academy of
Sciences, Warsaw. Submitted: April 17, 1964.

KEHIAIAN, H.

Thermodynamics of chemically reacting mixtures. Pt.12. Bul
chim PAN 12 no.7:497-501 '64.

1. Institute of Physical Chemistry of the Polish Academy of
Sciences, Warsaw. Submitted May 27, 1964.

KEHIAIAN, H.

Thermodynamics of chemically reacting mixtures. Pt.13. Bul
chim PAN 12 no.8:567-573 '64.

1. Institute of Physical Chemistry of the Polish Academy of
Sciences, Warsaw. Submitted June 20, 1964.

KEHIAIAN, H.

Thermodynamics of chemically reacting mixtures. Pt.14. Bul
chim PAN 9[i.e. 12] no.9:675-679 '64.

1. Institute of Physical Chemistry of the Polish Academy of
Sciences, Warsaw. Submitted July 16, 1964.

KEHIAIAN, K.; SOSNOWSKA-KEHIAIAN, K.

Thermodynamics of chemically reacting mixtures. Pgs. 5-6.
Bul chim PAN 11 no.10:583-596 '63.

1. Institute of Physical Chemistry, Polish Academy of Sciences,
Warsaw. Presented by W. Swietoslowski.

K E H L, J E R Z Y.

Distr: 4E2c(j)/4E3d

✓ Formaldehyde condensation. I. Stanisław Malinowski, Jerzy Kehl, and Stanisław Tyrlak (Politechnika, Warsaw). Roczniki Chem. 34, 391-400(1960)(English summary).—Condensation of HCHO (I) to polyalc. aldehydes was studied in presence of various catalysts. PbO (II), obtained by decompn. of Pb oxalate at low temps., was found to form an active complex with I, whereas II prepd. at high temps. was inactive. Oxides of other common metals (except CaO and MgO) were inactive as well as organolead compds. contg. the Pb(OH) group, or complexes of II with glycol or glyceraldehyde, acetylacetone, or acetoacetates.

A. Kreglewski

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1-BW(BW)
1-JAS(NB)
2

Zakład Technologii Organicznej i Politechniki, Warszawa.

KEHLER, Miro

Development of telegrams from the beginning of society up to our days.
PTT zbor 16 no.1/2:34-36 P '62.

KARSAY, Gyula, Dr.; KEHLI, Istvan, Dr.; KORANYI, Andras, Dr.

Pathography and therapy of intracerebral vascular attacks with special regard to ACTH therapy. Orvn. hetil. 99 no.31:1049-1053
3 Aug 58.

1. A Janos Korhaz-rendelointezet (igazgato: Tako Jozaef dr.) I. sz.
Belosztalyanak (foorvos: Koranyi Andras dr.) kozlemenye.

(CEREBRAL HEMORRHAGE, ther.

ACTH intravenous drop infusion (Hun))

(ACTH, ther. use

cerebral hemorrh., intravenous drop infusion (Hun))

CA KEHREN, M.

27

The spontaneous combustion of oiled textiles. M. Kehren. *Textil-Rundschau* 3, 400-17 (1949); *Chem. Zentr.* (Russian Zone Ed.) 1949, 1, 943. — The spontaneous combustion of oiled textiles is caused by the use of several unsatd. compds., such as linoleic or linolenic acid, or their glycerides, in the oiling process. Such processes are best tested with the Mackey test, which gives the relation between spontaneous temp. increase and time. Six curves are given showing the behavior of textile olein, mineral oil, water-contg. fat-poor dressing oils, and the influence of mineral soaps on such oils. Mineral oils are safe, even in the presence of metal soaps (Fe, Cr). The spontaneous oxidation can be retarded by antikatalysts such as β -naphthol or hydroquinone. Further suggestions are offered for the prevention of spontaneous combustion. M. G. Moore

CA

KEHREN M

25

Rubber poisons: origin and removal from textiles. M. Kehren, *SVF Fachorgan Textilberedl.* (Basel) 4, 111-4, 1953-70 (1949).—The chemistry of natural and synthetic rubbers, and chem. agents, e.g., Cu, Mn, Fe, Co, oils, and acids, which promote their "perishing" on textiles are discussed. The sources and detection of rubber poisons, especially traces of Cu and Mn, are reviewed, and the use of Trilon B for removing these metals is discussed. B. A.

KEHREN, A. H.

Journal of the Science
of Food and Agriculture
Jan. 1954
Sanitation

(2)
Iron treatment of textile waste-waters. I. M. Kehren and H. Denks
(Z. ges. Text. Ind., 1953, 65, No. 8, 417-426; J. Text. Inst., 1953,
44, A551).—The removal of suspended matter from textile waste-
water by means of treatment with Fe salts or metallic Fe (-waf)
is still the subject of investigation, the nature of the colloid reaction
involved being, as yet, uncertain. Possible physical and chemical
processes involved are discussed and the application of the Fe
treatment method to practical water purification, particularly in
relation to textile processing effluent, is described.
R. B. CLARK.

KEHYERDAL, Tur[Heyerdahl, Thor] (Norvegiya)

Seaways to Polynesia. Priroda 52 no.1:75-84 '63.
(MIRA 16:1)

(Polynesia—Discovery and exploration)

KEIBS, L.

~~FISHER~~

35

PHASE I BOOK EXPLOITATION

FOL/5981

Symposium on Electroacoustic Transducers. Krynica, 1958

Proceedings of the Symposium on Electroacoustic Transducers [held in] Krynica, 17-26 September, 1958. Warsaw, Państwowe Wydawnictwo Naukowe, 1961. 442 p. Errata slip inserted. 630 copies printed.

Sponsoring Agency: Polish Academy of Sciences. Institute of Basic Technical Problems.

Ed. in Chief: Janusz Kacprowski, Doctor of Sciences; Editing Committee: Ignacy Malecki, Professor, Doctor of Sciences; Wincenty Pajewski, Doctor; and Jerzy Wehr, Master of Sciences; Secretary: Juliusz Mierzejewski.

PURPOSE: This book is intended for physicists and acoustical engineers.

COVERAGE: The book is a collection of detailed research papers constituting the proceedings of a conference held in Krynica from 17 to 26 September 1958 under the auspices of the Institute of Technical Problems, Polish Academy of Sciences.

Card 1/8

35

Symposium on Electroacoustic Transducers

POI/5981

The following basic problems are treated: 1) theoretical research on energy transformation processes; 2) experimental development of new types of transducers; 3) electroacoustic measurements; 4) technology of piezoelectric and magnetostrictive materials; 5) construction of transducers for technical needs; and 6) design of acoustical transducer systems. No personalities are mentioned. References (if any) follow the individual articles.

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1. Classification of electromechanical transformation methods in the light of the tasks faced with the design and construction of electroacoustic equipment. V. S. Grigor'yev	7

Card 2/8

Symposium on Electroacoustic Transducers

POL/5981

- Ch. 3. Design and Properties of Electroacoustic Transducers
- 28. Intermodulation distortion in loudspeakers. Joseph Merhaut 204
 - 29. On the behavior of second-order gradient microphones in the near field. Carl Feik 205
 - 30. Certain problems of loudspeakers in stereophony and pseudo-stereophony. Wacław Koltonski 206
 - 31. Possibilities of increasing the efficiency of electromechanical transducers applied to electrodynamic loudspeakers. Zoltan Barat 308
 - 32. Methods for mechanical damping of dynamic loudspeakers by the application of porous materials. L. Keiba 312
 - 33. Combined electroacoustic transducers with the directivity characteristic rotating azimuthally. Jerzy K. Skrzela 327
 - 34. Experimental research on the radial ultrasonic field of the cylindrical barium titanate transducer. T. Tarnoczy and A. Illenyi 337
 - 35. Construction of up-to-date electroacoustic transducers. Stevan Milosavljevic 345

Card 6/8

KEIETI, J.

Study of the biological properties of some species of bacteria of the family Enterobacteriaceae. Cesk. farm. 13 no.3:110-114, Mr'64.

1. Katedra biochemie a mikrobiologie farmaceutickej fakulty UK, Bratislava.

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NE-10-0-
The creep performance of a few soft solders. A. Keil.
Metall 11, 740-2(1957).—Nearly all Bi alloys and soft
solders show a greater hardness in the cast condition on both
short time and long time hardness tests. In all cases the
hardness falls rapidly with time of loading. This creep
behavior in the case of pure Sn can be improved by the
alloying of Ag and Sb. This is also true for Ag additions to
Cd-Zn alloys. The use of such materials for soldering,
therefore, has advantages in technology. The advantage of
Ag addn. to Pb-Sn solders is not demonstrable; this element
is added, therefore, only if other reasons exist for its presence
in the alloy.

H. Stoertz

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MT

COMMON ELEMENTS		PROCESSING AND PROPERTIES INDEX	
CA		10	
<p>The synthesis of an isomer of dioxospartaine. F. Šorm and B. Keil (Tech. Univ., Prague). <i>Collection Czechoslov. Chem. Commun.</i> 12, 655-60(1947)(in English).—The prepn. of a dioxospartaine (I) was attempted for structural studies. <i>Di-Me α,γ-di-2-pyridylglutarate</i> (II), prepd. from <i>Me 2-pyridineacetate</i> (III) by 2 methods, was isolated as the <i>dipicrate</i>, m. 194-5° (from dioxane). (a) III (11 g.) in 20 cc. C_6H_6 was added dropwise to 2.90 g. atomized K in 100 cc. C_6H_6 and after 18 hrs. 9.82 g. CH_2I_2 was added with spontaneous reaction; when the alk. reaction had disappeared after 3 hrs. at 80°, the soln. was shaken with 25 cc. 3 N HCl at 0°, the aq. ext. made alk. with satd. aq. KOH, and the product which sepd. extd. with Et_2O, giving 3.8 g. (33%) II, b. 214-20°, as well as 1.4 g. of a fraction b. 270°. (b) Dry $(\text{CH}_2\text{O})_2$ (0.66 g.), 50 mg. piperidine, and 6.0 g. III were heated to 120° 5 min.; distn. gave 1.65 g. III, b. 120°, and 4.4 g. (84.5%) II, b. 208-10°. On hydrogenation 7.8 g. II in 100 cc. HOAc and 0.78 g. PtO_2 (Adams) at room temp. and 140 mm. took up 3335 cc. H_2 (3230 theory) and gave 0.8 g. of a fraction b. 98-100°, and 3.4 g. b. 175°. The latter in 10 cc. C_6H_6 was analyzed chromatographically on 75 g. neutral Al_2O_3.</p>		<p>The following fractions were obtained (no. of fraction, cc. of developer, and mg. of residue given): 1, 15 cc. C_6H_6, 675; 2, 15 cc. C_6H_6, 440; 3, 15 cc. C_6H_6, 280; 4, 30 cc. C_6H_6, 250; 5, 30 cc. C_6H_6, 140; 6, 30 cc. C_6H_6, 225; 7, 40 cc. C_6H_6, 115; 8, 40 cc. C_6H_6, 80; 9, 40 cc. C_6H_6, 75; 10, 40 cc. C_6H_6, 75; 11, 40 cc. C_6H_6, 50; 12, 40 cc. CHCl_3, 275; 13, 80 cc. CHCl_3, 600; 14, 40 cc. CHCl_3, 25. Fractions 2-6 were colorless gums, crystg. on wetting with Et_2O. Fractions 7-11 were fluorescent noncryst. gums. Fractions 12-14 were dark gums, crystg. on standing after wetting with C_6H_6. Fraction 1, a dark-colored gum, was reanalyzed on 18 g. Al_2O_3; the C_6H_6 eluate gave a dark gum with a basic odor. The CHCl_3 eluate was combined with fractions 2-6; the crystals produced, recrystd. from Et_2O, sublimed at 0.001 mm., and recrystd. twice from Et_2O, m. 17°, analyzed as I. The mother liquor from I, on Al_2O_3, gave a product m. 136-7° from the C_6H_6 eluate and fractions 13-14 gave a compd. m. 180-1° (from Et_2O), both of unknown structure. John W. Green</p>	
ASH-SLA METALLURGICAL LITERATURE CLASSIFICATION		C-277 72 1000	
RESEARCH DIVISION		RESEARCH DIVISION	
RESEARCH DIVISION		RESEARCH DIVISION	

CA
The synthesis of sparteine and isosparteine. P. Sorn and B. Keil, *Collection Czechoslov. Chem. Commun.* 13, 544-561 (1948) (in English).—The by-product in the prepn. of di-Me α,γ -di-2-pyridylglutarate (I) (C.A. 42, 5028b) was shown to be Me 4-oxo-3-(2-pyridyl)-1-pyrrolidinecarboxylate (II) formed from I during distn. under reduced pressure by the simultaneous splitting off of MeOH and dehydrogenation. II, b.p. 270-5°, m. 100° (from C₆H₆-petr. ether) (picrate, m. 230° (decompn.) (from dioxane)), was obtained from Me 2-pyridylacetate (III) in 13% yield with C₆H₆, and 25.5% yield with CH₂O. III (0.42 g.), 0.385 g. H₂C(OR)₂, and 0.5 cc. Ac₂O were heated 2 hrs. at 125-30°, the R(OAc) and excess Ac₂O distd., and the residue distd. to give 2 fractions, b.p. 180° and b.p. 220° (IV), which crystd. IV in C₆H₆ was chromatographed on 3 g. neutral Al₂O₃; the first 100 cc. of C₆H₆ eluate gave yellow needles of II, m. 100°. The identity of the II obtained by the 2 methods was shown by mixed m.p. and identical absorption curves in the visible spectrum. I (7.8 g.) in 100 cc. glacial AcOH and 0.78 g. Adams PtO₂ at room temp. and 140 mm. Hg excess pressure of H absorbed 3335 cc. H and was worked up to give 0.8 g., b.p. 98-100°, and 3.4 g., b.p. 175° (V). V (7 g.) in thiophene-free C₆H₆ was passed through 210 g. Al₂O₃. The following fractions of 20 cc. were collected and evapd. separately (fraction no., eluent, wt. in g.): 1, C₆H₆, 0.32; 2-12, C₆H₆, 3.05; 13-20, C₆H₆-CHCl₃, 0.08; 21-5, C₆H₆-CHCl₃, 0.87; 26-7, Et₂O, 0.20; 28-31, Et₂O-EtOH (9:1), 1.9. Fraction

1 did not crystallize. Fractions 2-12 crystd. on wetting with Et₂O and on fractional crystn. from Et₂O gave 0.30 g. colorless prisms, m. 171° (VI), and 0.3 g. longish prisms, m. 134° (VII) (mixed m.p. showed a depression of 15°), while the noncrystg. mother liquors on further chromatography gave 0.33 g. VII. VI, m. 172° after 2 recrystns. from Et₂O and sublimation in vacuo, was identical with the diosquartine previously described; VII, m. 135° after 2 recrystns. from Et₂O and sublimation in vacuo, was shown to be another diosquartine isomer. Fractions 21-5 and 26-7 did not crystallize on wetting with Et₂O. Fractions 26-7 and 28-31 crystd. on wetting with C₆H₆ and were recrystd. from EtOH-Et₂O to give Me 4-oxo-3-(2-piperidyl)octahydro-1-pyrrolidinecarboxylate (VIII). II (3.5 g.) in 70 cc. glacial AcOH and 0.4 g. Adams PtO₂ gave as above 3.4 g. of a colorless resinlike substance which was heated 2 hrs. at 180-210° in vacuo. The residue, 2.0 g., was noncryst. and after soln. in 10 cc. C₆H₆ was chromatographed through 120 g. neutral Al₂O₃. Fractions of 100 cc. were taken and evapd. separately (fraction no., eluent, and wt. in g.): 1, C₆H₆, 0; 2-10, C₆H₆, 1.31; 11-12, C₆H₆, 0; 13-15, CHCl₃, 0; 16-20, Et₂O, 0; and 21-4, EtOH, 1.49. The cryst. substance, m. 118-25°, from fractions 2-12 was sepd. into VI and VII; fractions 21-4 yielded VIII. VI (0.36 g.) in 10 cc. 30% H₂SO₄ was reduced electrolytically at 20-2° during 5.5 hrs. at 1.5 amp. with activated electrodes of pure Pb, made alk. with 15 g. aq. Ba(OH)₂, steam-distd., and the steam-distd.

late made neutral to methyl orange and taken to dryness to give 0.24 g. HCl salt (IX). IX (0.24 g.) in 2 cc. hot H₂O was added dropwise to 0.51 g. Na pic in 10 cc. H₂O, and the crude picrate which sep. was d with abs. alc. and recrystd. from alc.-dioxane to give 0.44 g. of the picrate, m. 222° (decompu.), presumably the dipicrate of



sparteine (X). VII on similar treatment gave 2 picrates, m. 187-9° (from alc.-dioxane) (XI) and m. 222° (from alc.-dioxane) (XII), which were sep'd. mechanically. XI may be the dipicrate of a isosparteine while XII appeared to be similar to X (cf. C.A. 28, 4064¹; 35, 3031²). By examn. of the structure of sparteine, if rings B and C are cis to each other, rings A and D can be attached to ring B or C, resp., either cis or trans. Thus, 3 isomerides can exist: (1) A:B cis, C:D cis; (2) A:B cis, C:D trans and (3) A:B trans, C:D trans. Each of these isomerides will be resolvable into optical antipodes. H. L. Yale

C A

4

Electrophoresis of proteins in agar jelly. A. H. Gordon, B. Keil, and K. Schasta (Cech. Univ., Prague, Czech.). *Nature* 164, 498-9 (1949).--Ferritin and hemoglobin were sepd. by electrophoresis in 1% agar jelly in 19 hrs. at 3.3 v./cm. Dilco 1:10,000 pepsin at pH 3 in NaOAc buffer sepd. into 2 main bands which was revealed by spraying with Pauli reagent (1) (Consden, *et al.*, C.I. 40, 4100). The adsorption at 280 m μ corresponded to the color developed with 1. Sepns. of the proteins of egg white at pH 6.8 and 8.0 were similar to those obtained by the Tiselius technique. Earl S. McColley

CA

MC

Electrophoresis of proteins in agar jelly. A. H. Gordon, H. Kell, K. Schest, O. Knesel, and P. Born (Tech Univ., Prague). *Collection Czechoslov. Chem. Commun.* 15, 110(1950)(in English); cf. C.A. 44, 1816J. An app. and methods for the electrophoretic sepn. of proteins in agar jelly (1) are described in detail (cf. C.A. 40, 4100P). The sepd. protein bands are detected either by their ultraviolet absorption at 280 or 200 m μ or by "printing off" the I on the filter paper and detecting with Pauly reagent or ninhydrin. Protein mobility at different agar concns. depends on the mol. wt. Whereas hemoglobin moves with the same speed, ferritin is slowed down considerably by higher I concns. Electrophoresis of egg white and normal human plasma resulted in sepn. of compds. similar to the sepn. obtained with the Tiselius method. Crude pepsin was sepd. into different fractions. A drawback of the method is the difficulty of removing the last traces of I from amino acids and proteins. The chief use for the method will be the sepn. of proteins on a preparative scale. K. Schoen

CA 116

Proteins and amino acids. IV. Partition chromatography of dinitrophenyl amino acids on kieselguhr and silicified materials. O. Kneissl, B. Keil, A. Maly, and P. Sorm (Tech. Univ., Prague). *Collection Czechoslov. Chem. Commun.* 15, 1018-24 (1951) (in English); cf. C.A. 45, 1182; 46, 3587d. The substitution of kieselguhr for silica gel in the method of Sanger (C.A. 40, 6551) gives a more reproducible system. If the kieselguhr is silicone coated or a silicone polymer is used, a "reversed-phase" chromatography ensues. The rate of movement, R , as a function of pH was evaluated as the ratio of R for a reference substance to R for the dinitrophenyl amino acid. The pH is selected that optimum sepn. is obtained for any given mixt. The dinitrophenyl derivs. of threonine, glycine, alanine, and phenylalanine and dinitroaniline were used as examples with a mobile phase of $\text{CHCl}_3\text{-EtOAc}$.

H. P. Block

CA

Proteins and amino acids. V. The preparation of apoferritin by alcohol precipitation. B. Keil and J. Potáčeková (Central Chem. Research Inst., Prague). *Collection Czechoslov. Chem. Commun.* 16, 204-6 (1951) (in English); cf. C.A. 46, 8022f. —Prepn. of ferritin (I) by Lauffer's procedure (C.A. 32, 2963f) gave within 8-9 hrs. cryst. material which yielded pure I after a single further crystn. Cryst. I was dissolved in an acetate buffer (pH 4.82) and freed from Cd by dialysis against the same buffer. The resulting clear dark-brown soln. contained 0.67 mg. N and 1.44 mg. Fe/ml. This soln. (21 ml.) was treated with 200 mg. $\text{Na}_2\text{S}_2\text{O}_4$ (II) and 100 mg. phenanthroline (III), let stand at 1° overnight, a further 100 mg. II and 23 mg. III added, the soln. let stand 1 hr., cooled to -5° while 29 ml. EtOH was added gradually from a separatory funnel with the stem of capillary and dipping below the liquid surface; the soln. was centrifuged 4 min. at -5° at 900 r.p.m. the liquid decanted, the sediment dissolved in the acetate buffer, made up to 14 ml., and 200 mg. II and 100 mg. III added; after 1 hr. a 2nd pptn. was carried out at -5° by addn. of 13.2 ml. EtOH. the centrifuged sediment dissolved in

buffer soln., and the apoferritin (IV) soln. dialyzed. faintly pink soln. of IV (80 mg.) contained 0.06% Fe and 18.9% N. The protein crystd. spontaneously on addn. of 1/2 vol. 20% CdSO_4 soln. to the dialyzed soln. VIII. A new synthesis of glutathione. J. Rudinger and P. Sorm. *Ibid.* 314-19; cf. C.A. 46, 3557d. —Into S-benzyl-L-cysteine (I) (14 g.) suspended in 350 cc. abs. dioxane in a 1-l. flask fitted with a liquid-sealed stirrer, reflux condenser with guard tube, and a gas-delivery tube to the bottom, and heated to 40°, COCl_2 was introduced at 40-5° until the I dissolved, then 2 hrs. the excess COCl_2 was removed with dry air, the distd. off at 30-40° and 15 mm. after filtering, and the residue taken up with boiling dry C_6H_6 ; on cooling there 10.5 g. S-benzyl-N-carboxy-L-cysteine anhydride (II), another liquor treated with ligroine gave 1.7 g. more; total 12.2 g. (77.5%), m. 105-6°, $[\alpha]_D^{25} -43 \pm 1.5^\circ$ (c 1.34, dioxane). To 3.76 g. II in 20 cc. tetrahydrofuran (III), cooled to -78°, was added dropwise a precooled soln. of 1.36 g. $\text{H}_2\text{NCH}_2\text{CO}_2\text{Et}$ and 0.94 g. 1-methylpiperidine in

Protolna. Hotivoj Kell. Chem. Zvesti 6, 483-7(1953).--
A lecture. Jan Micka

Bafiroj, Keil

Proteins and amino acids. XIII. Use of arachidonic
sulfonyl chloride in the determination of end amino acids of
peptide chains. Bořivoj Keil, Věra Kneršlová, and Fran-
tšek Šorm. *Chem. Listy* 46:167-70(1952). — The journal ref-
erence in C.A. 48, 3604c should have been *Chem. Listy* 46,
167-70(1952) instead of *Ibid.* 167-70. E. J. C.

2A KEIL, D.

*Biological Chemistry
Method - 11*

Proteins and amino acids. XII. Quantitative estimation of dinitrophenylated proteins. Bedřich Keil, Vladimír Lomáček, and Jana Sedláčková (Central Chem. Inst., Prague, Czech.). *Chem. Listy* 46, 457-61 (1952); cf. C.A.B. 46, 6592A. A method for the detn. of the basic end groups in proteins has been worked out on the basis of the formation of dinitrophenyl derivs. and their analysis by means of countercurrent distribution and paper chromatography. The method was applied to the detn. of 1 mol. of aspartic acid in beef serum albumin. The analysis was carried out in the dark since the dinitrophenyl derivs. of amino acids are not stable toward the daylight. M. Hudlický

KEIL, B.

Proteins. XXIX Oxidation of pancreatic proteases. p. 1837

Vol. 48, no. 12, Dec. 1954

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So: Eastern European Accession Vol. 5, No. 4, 1956

KEIL, B.

Proteins. XXIX. Oxidation of pancreatic proteases. In Russian. p. 471.

Vol. 20, no. 2, April 1955

SBORNIK CHEKHOSLOVATSKIKH KHIMICHESKIKH RABOT

Praha, Czechoslovakia

So: Eastern European Accession Vol. 5, No. 4, April 1956

KEIL, B.

Reviewing and summarizing
General - 11

Proteins and amino acids. XIII. Activation of chymotrypsinogen to chymotrypsin. Prantšek Šorm, Hrdlička, and Ivan Rychlík (Central Chem. Inst., Prague, Czech.). *Chem. Listy* 46, 461-4 (1952), cf. C.A. 46, 11284y.
On the basis of quant. paper chromatography of dinitrophenyl deriva. of amino acids, *chymotrypsinogen* (I) was found to contain no basic end group. Activation is followed by the formation of 2 amino groups (based on the mol. wt. 22500). In addn., a mixt. of tri- to octapeptides is formed as a result of hydrolytic processes. Cryst. α -chymotrypsin consists of 2 or 3 proteins having the same proteolytic activity. During the crystn., the content of a form contg. 1 mole of alanine and 1 mole of phenylalanine as end amino acids increases. Proteins with aspartic acid, serine, and threonine as end amino acids accumulate in the mother liquors. Activation of I is based probably on the cleavage of cyclic peptide chains which reveal the center of activity. XIV. Enzymic activity of dinitro derivatives of α -chymotrypsin. Prantšek Šorm and Ivan Rychlík. *Ibid.* 465-8. — By the action of 1,2,4- $\text{CaH}_2\text{P}(\text{NO}_2)_3$ 150 mg. on lyophilized chymotrypsin (I) (300 mg. in a soln. contg. 300 mg. NaHCO_3 in 15 ml. H_2O), dinitrophenyl deriva. contg. 2, 4, and 7 dinitrophenyl

groups per mol. of I, resp., were prepd., purified by dialysis and analysed by spectrophotometry. Protease and chymase activities drop with increasing rate of substitution, esterase activity of I contg. 2 dinitrophenyl groups is higher, that contg. 4 groups about the same, and that contg. 7 dinitrophenyl groups per mol. of I lower than that of I. Michaelis const. and max. reaction rate of I pure and I contg. 2, 4, and 7 dinitrophenyl groups, resp., are: 0.013, 0.0032, 0.0020, and 0.0018; 0.50, 0.40, 0.30, and 0.12. Tendency of synthesizing polypeptides of methionine from its Pr ester increases with increasing amt. of dinitrophenyl groups. XVI. Interaction of proteins with electrolytes. Vladimír Kačena and Luboš Matoušek. *Ibid.* 525-8; cf. C.A. 46, 11315g. — A dynamic equil. exists in a system protein-metal ions in which protein (serum albumin) represents a complexing agent of low diffusion const. This accounts for the fact that a wave showing the reduction of ions forming a complex with serum albumin is, at a certain pH, higher than that corresponding to the flow of ions in the complex.
M. Hrdlička

Shurt, J. (2)

(after crystn. from CCl₄-petr. ether, m. 85°). V (5 g.) refluxed 4 hrs. with 15 ml. 10% aq. HBr, then evapd., and the residue (0.2 g.) dissolved in 40 ml. MeOH and 4 ml. C₆H₅N yielded 1.7 g. (55%) IV, m. 165° (from H₂O). VI (30 g.) and 22.5 g. MeOH:CHCl₃ refluxed 15 hrs. with 0.4 g. Na in 20 ml. EtOH, the mixt. acidified, extd. with three 50 ml. portions of ether, and the exts. evapd. yielded 29.5 g. (60%) of VII, b.p. 122-3°. The Schmidt reaction carried out in the same way as for V gave 17 g. of an oil which was directly hydrolyzed with dil. H₂SO₄ (5 ml. concd. H₂SO₄ in 10 ml. H₂O for 11 g. of the oil by refluxing 5 hrs.; after the removal of the H₂SO₄ and H₂O, the residue was evapd. to dryness and dissolved in 10 ml. H₂O and 10 ml. EtOH to yield 2 g. IX, m. 151°, after crystn. from H₂O, m. 152° (decolorized). The Schmidt reaction with 30 ml. H₂SO₄ (200 ml. CHCl₃, 31 g. VIII, and 100 ml. 2.0% HN₃) gave an intermediate (XIV), which, after hydrolysis with dil. H₂SO₄, hydrolyzed to the base yielded 1.2 g. X, m. 154-5° (from H₂O). XIII. Use of azobenzene-sulfonyl chloride in determination of end amino acids of peptide chains. Note: (1) (2) (3) (4) (5) (6) (7) (8) (9) (10) (11) (12) (13) (14) (15) (16) (17) (18) (19) (20) (21) (22) (23) (24) (25) (26) (27) (28) (29) (30) (31) (32) (33) (34) (35) (36) (37) (38) (39) (40) (41) (42) (43) (44) (45) (46) (47) (48) (49) (50) (51) (52) (53) (54) (55) (56) (57) (58) (59) (60) (61) (62) (63) (64) (65) (66) (67) (68) (69) (70) (71) (72) (73) (74) (75) (76) (77) (78) (79) (80) (81) (82) (83) (84) (85) (86) (87) (88) (89) (90) (91) (92) (93) (94) (95) (96) (97) (98) (99) (100) (101) (102) (103) (104) (105) (106) (107) (108) (109) (110) (111) (112) (113) (114) (115) (116) (117) (118) (119) (120) (121) (122) (123) (124) (125) (126) (127) (128) (129) (130) (131) (132) (133) (134) (135) (136) (137) (138) (139) (140) (141) (142) (143) (144) (145) (146) (147) (148) (149) (150) (151) (152) (153) (154) (155) (156) (157) (158) (159) (160) (161) (162) (163) (164) (165) (166) (167) (168) (169) (170) (171) (172) (173) (174) (175) (176) (177) (178) (179) (180) (181) (182) (183) 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Proteins and aminoacids. XII. Synthesis of γ -methylglutamic acids. Jit Šurt and František Šorm (Central Chem. Inst., Prague, Czech.). *Collections Czechoslov. Chem. Commun.* 18, 131-9(1953) (English summary); cf. *C.A.* 47, 12459d. — After the failure of the Curtius degradation of ester azide of (cyanomethyl)malonic acid, the Schmidt reaction was used for prepg. all three γ -methylglutamic acids. $\text{AcCHMeCO}_2\text{Et}$ I with $\text{CH}_2=\text{CHCN}$ (II) gave $\text{EtO}_2\text{CCMe-}\gamma\text{-glutamate c. I (IV)}$. IV was also transformed directly to α -methyl- $\text{O}_2\text{CCMe(NHAc)CH}_2\text{CH}_2\text{CO}_2\text{Et}$ (V) resulting from the action of NH_3 on $\text{EtO}_2\text{CCMeCCH}_2\text{CH}_2\text{CO}_2\text{Et}$. $\text{AcCH}_2\text{CO}_2\text{Et}$ (VI) and $\text{MeCH}_2\text{CHCO}_2\text{Et}$ gave $\text{EtO}_2\text{CCMeAcCHMe-CH}_2\text{CO}_2\text{Et}$ (VII). VI and $\text{CH}_2=\text{CHCO}_2\text{Me}$ gave $\text{EtO}_2\text{CCMeAcCH}_2\text{CH}_2\text{CO}_2\text{Me}$ (VIII). VII and VIII were transformed to β - (IX) and γ -methylglutamic (X) acids resp. by the Schmidt reaction. $\text{MeCH(CO}_2\text{Et)}_2$ (17.3 g., 15 ml. dioxane and 2 ml. Redien's catalyst treated with 10.0 g. II at 30-40° with cooling, the mixt. acidified with HCl (1:3) after 3 hrs., treated with 25 ml. CHCl_3 and 25 ml. H_2O , and the org. layer evapd. *in vacuo* to yield 95% $\text{(NCCCH}_2\text{CH}_2\text{CMe-CH}_2\text{CO}_2\text{Et)}$, b.p. 110°, d_4^{20} 1.0692, n_D^{20} 1.4309. I (24.8 g.), 10 ml. dioxane, 9.5 g. Na, and 20 ml. EtOH was added, in the course of 1 hr., 21.2 g. II at 35° and the product isolated as above yielding 21 g. (91%) of III, b.p. 113°, d_4^{20} 1.0608, n_D^{20} 1.4468. III (10.7 g.) in 120 ml. of 4.7% NaOH soln. was added to a stirred mixt. of 30 ml. concd. H_2SO_4 in 250 ml. CHCl_3 at 20-30°, the cooled reaction mixt. dild. with 120 ml. H_2O , the aq. layer extd. with 25 ml. CHCl_3 , refluxed 10 min., dild. with distd. H_2O to 500 ml., mixed with 215 g. Ba(OH)_2 in 500 ml. hot H_2O , boiled 30 min., the BaSO_4 was filtered off, washed with 800 ml. hot H_2O contg. 5 ml. H_2SO_4 , the Ba and SO_4 ions removed, and the filtrate evapd. *in vacuo* to 100 ml., treated with 100 ml. EtOH and allowed to cryst. in an ice box to yield 8.8 g. (55%) of IV, m. 100° (from H_2O). To 17 g. of $\text{EtO}_2\text{CCAcMeCH}_2\text{CH}_2\text{CO}_2\text{Et}$ in 100 ml. CHCl_3 and 34 ml. concd. H_2SO_4 was added 7 g. HN_3 , portion-wise with cooling at 30-35°, the mixt. poured onto 200 g. ice, and the CHCl_3 layer extd. with 100 ml. H_2O , dried, and evapd., leaving 14.2 g. (79%) V, m. 64-8°.

(over)

KEIL, B.; TOMASEK, V.; SEDLACKOVA, J.

On albumins and aminoacids. Part 14. Quantitative analysis of dinitrophenylized albumins [with summary in German]. Sbor.Cekh.khim.rab. 18 no.2:275-284 Ap '53. (MLRA 7:6)

1. Institut organicheskoy khimii Chekhoslovatskoy Akademii nauk, otdeleniye organicheskoy biokhimii, Praga. (Dinitrophenyl) (Albumin)

SORM, F.; KEIL, B.; RYCHLIK, I.

On albumins and aminoacids. Part 15. Activation of chymotrypsinogen to chymotrypsin [with summary in German]. Sbor.Cekh.khim.rab. 18 no.2: 285-293 Ap '53. (MLRA 7:6)

1. Institut organicheskoy khimii Chekhoslovatskoy Akademii nauk, otdeleniye organicheskoy biokhimii, Praga. (Chymotrypsin)

KEIL, B.; SORM, F.

On proteins. Part 19. Methylation of chymotrypsogen and chymotrypsin
[with summary in English]. Sbor.Chekh.khim.rab. 18 no.4:550-559 Ag '53.
(MLRA 7:6)

1. Department of Organic Biochemistry, Central Chemical Research Institute,
Prague. (Chymotrypsin) (Methylation)

KEIL P.

Proteins. XIX. Methylation of chymotripsinogen and chymotrypsin. p.245
(Chemicke Listy. Vol. 47, No 2, Feb. 1953) Czechoslovakia

SO: Monthly List of East European Accessions, Vol. 2, #8, Library of Congress,
August 1953, Incl.

Keil, B.

✓ Herout, V., Keil, B., Protiva, M., Hudlicky, M., Ernest,
I., and Gut, J.: Laboratorní technika organické chemie.
CII Prague: Nakl. CSAV. 1934. 756 pp. Kčs 80. Re-
viewed in Chem. Listy 49, 1415(1955).

Chem) + Educ

Herout, V., Keil, B., Protiva, M., Hudlicky, M., Ernest, I., and Gut, J.:
Organic Chemistry Laboratory Techniques. Publishing House CSAV. 1954.
756pp. Kčs. 86. Reviewed in Chem. Listy 49, 1415(1955).

PM JKH

LAUCIKOVA, O.; JAKUBOVIC, A.; KEIL, B.; SORM, F.

Viruses I; isolation and chemical properties of Rous sarcoma.
Chekh. biol. 3 no.5:298-307 Nov 54.

1. Institut organicheskoy khimii ChSAN, organicheskaya biokhimiya,
Praga.

(VIRUSES,

Rous sarcoma virus, isolation & chem.)

(NEOPLASMS, experimental,

Rous sarcoma virus, isolation & chem.)

(SARCOMA, experimental,

Rous sarcoma virus, isolation & chem.)

KEIL, F.
MELOUN, B.; KEIL, B.; SORM, F.

Amino acids and peptides. Part 9. Constitution of the peptide phalloidine; part 2 [in German with summary in Russian]. Sbor.Cekh.khim.rab. 19 no.1:153-161 F '54. (MLRA 7:6)

1. Otdeleniye organicheskoy biokhimii, Institut organicheskoy khimii
Chexoslovatskoy Akademii nauk, Praga. (Phalloidine)

1. Chemical; CERN, F.; KNESSLIOVA, V.

Collection. XXI. 1. Gold Edition of the - a collection of chemical
papers of Czechoslovak scientists in the field of chemistry.
(Collection of Czechoslovak Chemical Communication. Praha. Vol. 19, no. 4, Aug. 1954)
It: ^{East} Chemical Communication (1954), 19, no. 4, Aug. 1954,
p. 1, 2.

KEIL, B.

2

14956* Proteins. O belkakh. XXV. Chemical Structure of Proteins. Introduction. O khimicheskom stroeni belkov. Vvedenie. F. Shorm. XXVI. Photometric Analysis of Protein Hydrolysates. Fotometricheskii analiz belkovykh gidrolizatov. (Russian.) B. Keil. Collection of Czechoslovak Chemical Communications, Prague 5, Oct. 1954, p. 1003-1017. Analysis of individual peptides or peptide fractions as an approach to the problem. Tables, graphs. 29 ref

K111, #

1954

On photolysis. XXVI. Photoelectric analysis of organic compounds. 1.1. 6. (Collection of
Czechoslovak Chemical Communication. Praha. Vol. 19, no. 5, Oct. 1954)
DC: ^{East} MONTHLY INDEX OF CHEMICAL ABSTRACTS (1954, 1955, Vol. 1, 2, 3,
June 1954, Vol. 1).

K216, E.

REMARKS : SORM, F.

On proteins. XXVII. Comparative study of the effect of the partial hydrolysis of tyrosine on the properties of the protein. Czechoslovak East. Chemical Communication. Praha. Vol. 19, no. 5, Oct. 1954)
CC: Chemistry Division / American Academy of Sciences, ...
Date: 1955, ...

~~XXXXXXXXXX~~, K. R. L.
XEL, R. L. V. V.

Proteins XXVI Photometric analysis of protein
hydrolyzates (butyric acid) 1954-1955
Chem. 1954-1955 1954-1955 1954-1955
quant. method 1954-1955 1954-1955
fein. hydrolyzates 1954-1955 1954-1955
negative 1954-1955 1954-1955
detected light 1954-1955 1954-1955
rate is left 1954-1955 1954-1955
negative 1954-1955 1954-1955
abundance 1954-1955 1954-1955
sinogen, and next group 1954-1955 1954-1955
examples. 1954-1955 1954-1955
M. Hadley

KEIL, B.

"Proteins. XXVII. Comparative study of acidic peptide fractions from partial hydrolyzates of chymotrypsin and trypsin." Ceskosloveska morfologie, Praha, Vol. 48, No. 5, May 1954, p. 735.

SO: Eastern European Accessions List, Vol. 3, No. 11, Nov. 1954, 1.C.

KEIL, BORIVOJ
CZECH

Proteins. XXVIII. Comparison of the arginine peptides from partial hydrolyzates of chymotrypsinogen and trypsinogen. Jiri Vanáček, Borivoj Keil, and Vladimír Šolín. *Česká akad. věd, Přírodovědná třída*, 48, 1967, 1016-1021, 48, 11747. — Chymotrypsinogen (I), trypsinogen (II), and insulin (III) (in 200 cc. soln.) were partially hydrolyzed by heating 6 days at 37° with 10 ml. concd. HCl. The arginine peptides were sepd. by passing the hydrolyzates over a column filled with Amberlite IRA-400, and further investigated by means of total hydrolysis and the dinitrophenyl method. Both I and II contain the grouping α -arginyl and γ -arginyl. I differs from II by contg. a third mol. of arginine bound to threonine and alanine. In III the main grouping of glycine and arginine corresponds to the Saeger formula but the grouping of arginine with leucine is in contradiction. **XXIX.** Oxidation of pancreatic proteases. Borivoj Keil. *Ibid.* 1837-41. — Oxidation of I, II, and α - and γ -chymotrypsins with performic acid is accompanied by denaturation of the proteins and by splitting off small amts. of low-mol. peptides. Hydrolytic fission of peptide bonds during the reaction cannot be prevented. Biol. activity decreases rapidly with oxidation. Two main chains of chymotrypsin seem to be linked not only by disulfide bridges, but by stronger, probably peptide bonds. The oxidation was carried out by dissolving the protein (1 g.) in a mixt. of 40 ml. 90% HCO₂H and 4 ml. 25% H₂O₂, holding at room temp. 20 min., adding 40 ml. H₂O, and evapp. to dryness below 50° *in vacuo*. The residue was stirred with Me₂CO (60 ml.), the gummy mass centrifuged, washed twice with 60 ml. Me₂CO, stirred with 60 ml. 9.1N NH₄OH, after 2 hrs. the pH adjusted to 6 with 5N H₂SO₄, the ppt. 0.8 g. centrifuged, the filtrate acidified with 6N AcOH to pH 4, dried

G Vanecek

from frozen state, the residue dissolved in 8 ml. H₂O, treated with 8 ml. 50% AcONH₄, the ppt. of 20 mg. centrifuged, the soln. evapd., and AcONH₄ evapd. at 90° and 0.1 mm., leaving 80 mg. product (A), sol. in H₂O, mol. wt. approx. 3000. Ultraviolet absorption spectra show an absence of aromatic amino acids. Ultraviolet spectra of I, II, and fractions (A) of both proteins are given.

M. Hadlick

2/2

KEIL, B

Prostos. XXIV. Substitution of ϵ -amino groups of lysine in the molecule of chymotrypsinogen by the reaction with dinitrofluorobenzene. Věra Knešlová, Bohumír Keil, and Bratislav Ševc (Ústav Org. Chem., Česká Akademie věd, Praha, Czech.). Chem. Listy 48, 609-611(1954); cf. C.A. 48 6478b.—By carrying out the reaction of 2,4-dinitrofluorobenzene (I) with chymotrypsinogen in a solution of NaHCO_3 and 1% Me₂N, under certain conditions all of the ϵ -amino groups in lysine reacted with I. The importance of pH in the reaction is stressed. M. Hudček

Kell, B.

CZECH

The peptide accompanying pancreatic ribonucleic acid
B. Kell and M. Hrabělová (Czech Acad. Sci., Prague;
Chem. Listy 49, 271-4, 1955).—The peptide accompanying
pancreatic ribonucleic acid was found to give a slight om-
hydropy test. M. Hrabělová

Proteins. XXXIII. Differences in the arginine peptides of some serum albumins. Věra Knešlová, Vladimír Kostka, Bořivoj Keil, and František Šorm (Czech. Akad. Věd, Prague). *Chem. Listy* 49, 913-20(1955); cf. C.A. 49, 10002h. —Human, beef, horse, duck, and sheep serum albumins were subjected to partial hydrolysis by heating 200-mg. portions of the proteins 144 hrs. at 37° with 10 ml. concd. HCl. From the partial hydrolyzates the arginine peptides were isolated by means of the ion exchanger Amberlite IR-A. Hydrolysis of the arginine peptides with equal vols. of concd. HCl (16 hrs. at 105° in a sealed tube), paper chromatography in BuOH-AcOH system, hydrolysis of individual fractions with 6N HCl (16 hrs. at 105°), paper chromatography in the BuOH-AcOH system, and dinitrophenyl analysis revealed considerable differences in the content of the individual amino acids in serum albumins of various origins, although the total hydrolyzates of all of the investigated serum albumins showed only slight differences.

M. Hudlický

KEIL, BORIVOJ

Virus studies. VII. A comparative study of two strains of the tobacco mosaic virus. Alexander Jakubovič, Libor Šlechta, Borivoj Keil, and František Šorm (Czech. Akad. Véd, Prague). *Chem. Listy* 49, 1561-4 (1955); cf. *C.A.B.* 49, 104-106.—Ultraviolet spectrum, electrophoretic mobility, and qual. and quant. content of amino acids are given for cryst. forms of the ordinary strain and Alke-strain of the tobacco mosaic virus. Only the Alke-strain was found to contain histidine. Electron-microscope photographs of both cryst. forms are given. M. Hudlický

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(3)

KEIL BORIVOJ

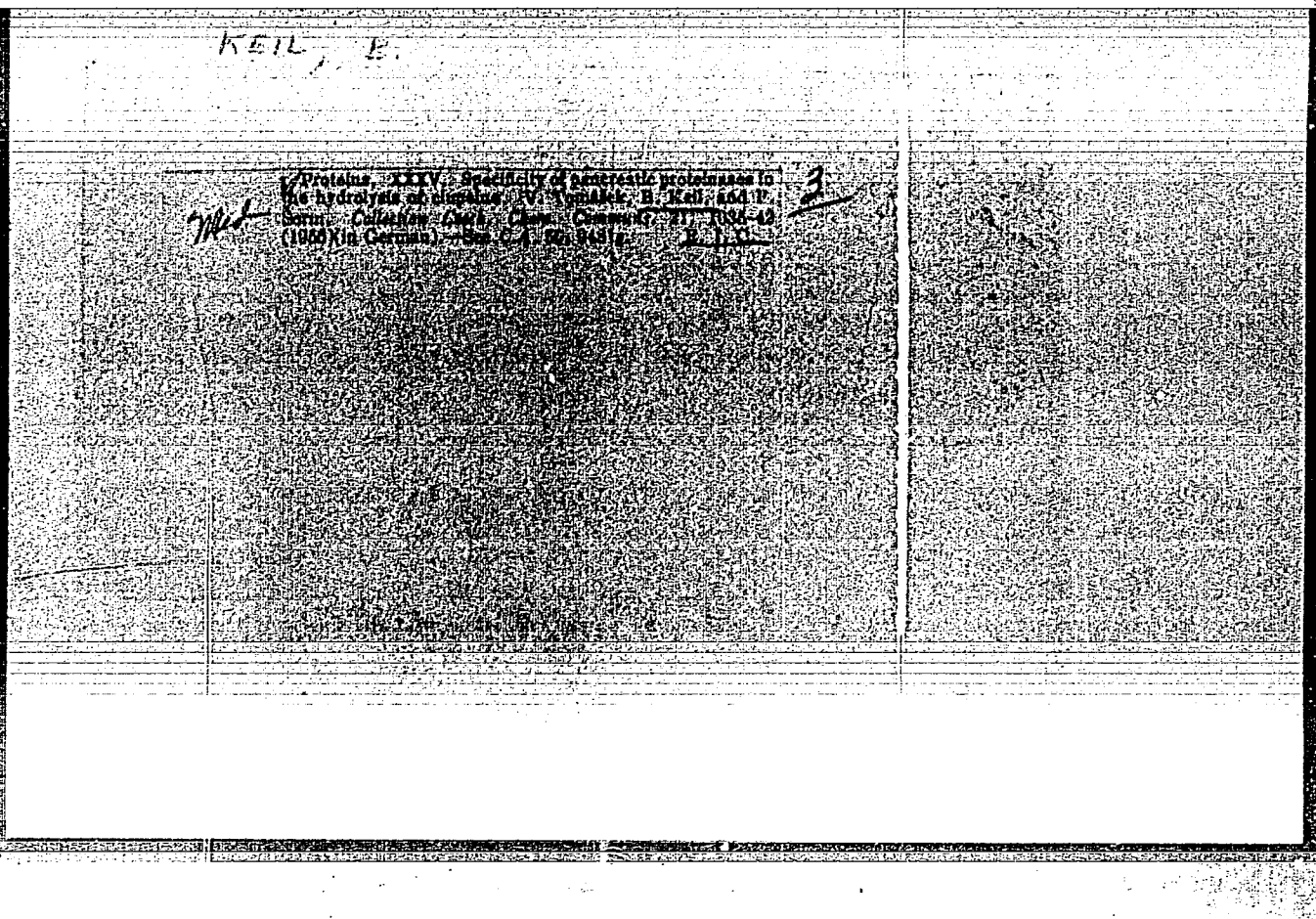
met ✓ Virus studies. VII. A comparative study of two strains
of the tobacco mosaic virus. Alexander Jakubovič, Libor
Šlechta, Borivoj Keil, and František Šorm. Collection
Czechoslov. Chem. Commun. 21, 29-32 (1956) (in German).—
See C.A. 50, 440e.
E. J. C.

4

MIL, B.

MIL, B. Proteins. XXXV. Specificity of pancreatic proteinases in the fission of clupein. p. 623. Vol 50, no. 4, Apr. 1956. CENOTOKE LISTY. Praha, Czechoslovakia.

SOURCE: East European Accessions List (EEAL) Vol. 6, No. 4--April 1957



KEYL', B.

International conference on protein. Vop. med. khim. 3 no.1:74-77
Ja-F '57 (MLRA 10:4)

1. Khimicheskiy institut Chekhoslovatskoy akademii nauk, Praga.
(PROTEINS)

KEIL, B.

AUTHORS: ŠORM, P., Keil, B., Holýšovský, V., Meloun, B.,
Mareš, O. and Váňáček, J. CZ/8/52(82)/10-26/39

TITLE: Proteins.LIX. Comparison of the Microstructure of
Chymotrypsinogen and Trypsinogen. Preliminary
Communication (O bílkovinách.LIX. Srovnání
mikrostruktury chymotrypsinogenu a trypsinogenu.
Předběžná sdělení)

PERIODICAL: Chemické listy, 1958, Vol 52(82), Nr 10, pp 1992-1995
(Czechoslovakia)

ABSTRACT: This is a continuation of the discussion on the micro-
structure of proteins in which the authors draw on their
own experimental results (previously published) and
those of others. Attention is drawn to the repetition
of certain peptide residues in the two proteins
considered.
There are 3 tables and 34 references, 12 of which are
Czech, 22 Western.

Card 1/2

6

ASSOCIATION: Biochemické oddělení, Chemický ústav,
Československá Akademie věd, Praha (Biochemistry
Division, Institute of Chemistry, Czechoslovak Academy
of Science, Prague)

SUBMITTED: March 13, 1958

Card 2/2

KEIL, B.; SOREN, P.; MARLAR, P.

Proteins and amino acids. XXXVIII. Comparison of arginine peptides of partial hydrolyses of two hemoglobins. p. 352. (Chemische Listy, Vol. 51, no. 2, Feb. 1957.)

SO: Monthly List of East European Accession (EEAL) Vol. 6, no. 7, July 1957. Uncl.

KEIL, B.

Abs Jour: Ref Zhur.-Khimiya, 1958, No II

Author: O. Mikes, J. Vanecek, B. Meloun, B. Keil, V. Kostka, J. Kara.

Inst: Not given

✱ Title: Multiple-Chamber Appliance for the Preparative Electro-phoresis.

Orig Pub: Chem. listy, 1957, 51, No 8, 1562-1569.

Abstract: A description of a modified multi-chamber appliance ✱ for the preparative zonal electrophoresis at the constant value of pH, in which are combined ✱ the advantages of 3-chamber Svenson's appliance with those electrophoretical ones to the work in an auxiliary medium. A rectifier with a regulated voltage of 0-10,000 v serves as a source of tension.

KEIL, BORIVOJ

CZECHOSLOVAKIA / Laboratory Equipment. Instruments, Theory, Construction, Use.

Abs Jour : Ref Zhur - Khim., No 15, 1958, No 50138

Author : Kocent, Alexandr; Brada, Zbyněk; Keil, Borivoj.

Inst : Not given

Title : Gravimetric Fraction Collector for Chromatography.

Orig Pub : Chem. listy, 1957, 51, No. 8, 1575-1576.

Abstract : An electromagnetic arrangement, which enhances the reliability of the work of a gravimetric lever collector of fractions, is described. -- M. Ryba.

NEIL, B.; SCHUL, F.

"Proteins." XLVII. Cysteic-acid peptides from a partial chymotrypsinogen hydrolysate. XLVIII. Cysteic-acid peptides from a partial trypsin hydrolysate. In English. p. 1558.

COLLECTION OF CZECHOSLOVAK CHEMICAL COMMUNICATIONS, Praha, Czech.,
Vol. 24, No. 5, May 1959

Monthly List of East European Accessions (EDA), LC, Vol. 8, No. 6, Sept. 59

Unclassified

MELOUN, B.; HOLEYSOVSKY, V.; VANECEK, J.; KEIL, B.; SORM, F.

Proteins. LIII. Peptides of aspartic acid and glutamic acid isolated from a chymotrypsinogen hydrolysate. In English. Coll.Cz.Chem. 24 no.9:3002-3006 S '59. (REAI 9:5)

1. Department of Biochemistry, Chemical Institute, Czechoslovak Academy of Science, Prague.

(Proteins) (Peptides) (Aspartic acid) (Glutamic acid)
(Chymotrypsinogen)

VANECEK, J.; KEIL, B.; MELOUN, B.; SORM, F.

Proteins LIV. Isolation of some peptides from tryptic hydrolysates of chymotrypsinogen and diisopropylphosphoryltrypsin. In English. Coll.Cz.Chem. 24 no.9:3148-3153 S '59. (EEAI 9:5)

1. Department of Biochemistry, Czechoslovak Academy of Science, Prague.

(PROTEINS) (PEPTIDES) (CHYMOTRYPSINOGEN)
(TRYPSIN DIISOPROPYL PHOSPHATE)

KARADZOVA, M.; KEIL, B.; SORM, F.

Peptides isolated from acid hydrolysate of edestin. Coll Cz Chem 25
no.11:2878-2888 N '60. (EEAI 10:6)

1. Institute of Organic Chemistry and Biochemistry, Czechoslovak
Academy of Science, Prague.
(Peptides) (Edestin)

PRUSIK, Z.; KEIL, B.

An investigation of conditions of separating substances by high-voltage electrophoresis on paper. Coll Cz Chem 25 no.8:2049-2058
Ag '60. (EEAT 10:9)

1. Department of Biochemistry, Institute of Chemistry, Czechoslovak Academy of Science, Prague.

(Electrophoresis) (Separation)

VANECEK, J.; MELOUN, B.; KOSTKA, V.; KEIL, B.; SORM, F.

Proteins. LXI. Peptides isolated from peptic hydrolysate of chymotrypsinogen. Coll Cz Chem 25 no.9:2358-2368 S '60.

(EEAI 10:9)

1. Institute of Organic Chemistry and Biochemistry Czechoslovak Academy of Science, Prague.

(Proteins) (Peptides) (Chymotrypsinogen)

SORM, F.; KEIL, B.; VANECEK, J.; TOMASEK, V.; MIKEŠ, O.; MELOUN, B.;
KOSTKA, V.; HOLEYSOVSKY, V.

Proteins. LXIII. Lower structures in the chains of proteins. Coll Cz
chem 26 no.2:531-578 F '61. (EEAI 10:9)

1. Institute of Organic Chemistry and Biochemistry, Czechoslovak
Academy of Science, Prague.

(Proteins)

HEYROVSKY, Jaroslav, dr., akademik, nositel Nobelovy ceny; JANAK, Jaroslav, inz.; VOLF, Milos Bohuslav, dr.; KEIL, Borivoj, Dr.Sc., laureat statni ceny; KOSSLER, Ivo, dr.

Observations of our famous collaborators on making new laboratory instruments. Tech praca 14 no.8:655-664 Ag '62.

1. Ceskoslovenska akademie ved (for Janak and Kossler).

S/058/62/000/012/033/048
A160/A101

AUTHORS: Keil, B., Šorm, F.

TITLE: On proteins. LXXI. An analysis of protein structures from the aspect of amino acid interchanges

PERIODICAL: Referativnyy zhurnal, Fizika, no. 12, 1962, 36 - 37, abstract 12D260 ("Collect. Czechosl. Chem. Commun", no. 5, 1962, v.27, 1310 - 1319, English; summary in Russian)

TEXT: The series of amino acids is compared to various proteins to find the symmetry or a similarity in the arrangement of amino acids along the polypeptide chain by taking into consideration a possible substitution of one amino acid by another. By using the method of symbols, it was shown that the symmetry principle occurs rather frequently in the arrangement of amino acids. For ribonuclease and C cytochrome it was discovered that a definite series type is most frequently found, i.e., a major part of the protein is built from several main series. This is particularly clearly apparent in the case of α - and β -chains of hemoglobin. Part 70 see ref. 12D259.

[Abstracter's note: Complete translation]

Card 1/1

Inst. Organic Chemistry Biochem, Czech AS, Prague

KEIL, B.; SORM, F.

On proteins. Part 73: Desulfuration of sulfur containing
amino acids in peptides. Coll Cz Chem 27 no.7:1673-1677
Jl '62.

1. Institute of Organic Chemistry and Biochemistry, Czechoslovak
Academy of Sciences, Prague.

KEIL, B.; ZIKAN, J.; REXOVA, L.; SORM, F.

On proteins. Part 74: Hydrogenation of aromatic amino acids in peptides. Coll Cz Chem 27 no.7:1678-1686 JI '62.

1. Institute of Organic Chemistry and Biochemistry, Czechoslovak Academy of Sciences, Prague (for Keil and Sorm). 2. Institute of Physical Chemistry, Czechoslovak Academy of Sciences, Prague (for Zikan). 3. Institute of Chemistry, Slovak Academy of Sciences, Bratislava (for Rexova).

KEIL, B.; MORAVEK, J.; DLOUHA, V.; FILIP, J.

On proteins. Part 75: Desulfuration and hydrogenation of amino acids by using tritium. Coll Cz Chem 27 no.7:1687-1691 J1 '62.

1. Institute of Organic Chemistry and Biochemistry, Czechoslovak Academy of Sciences and Institute for Research, Production and Utilization of Radioisotopes, Prague.

MIKES, O.; HOLEYSOVSKY, V.; TOMASEK, V.; KEIL, B.; SORM, F.

On proteins. Part 76 : Structure of peptides isolated from a tryptic digest of diisopropylphosphoryl-trypsin. Coll Cz Chem 27 no.8:1964-1987 Ag '62.

1. Institute of Organic Chemistry and Biochemistry, Czechoslovak Academy of Sciences, Prague.

KEILOVÁ, H; KEIL, B.

Czechoslovakia

Institute of Organic Chemistry and Biochemistry,
Czechoslovak Academy of Sciences -- Prague
- (for all)

Czechoslovak
Prague, Collection of Chemical Communications,
No 9, 1962, pp 2186-2191

"Proteinases of the Ehrlich Ascites Tumour. I.
Basic Characterization of the Proteinases and
Their Dependence on the Growth of the Tumour."

KEILOVÁ, H; KEIL, B.

Czechoslovakia

Institute of Organic Chemistry and Biochemistry,
Czechoslovak Academy of Sciences -- Prague
- (for all)

Prague, Collection of Czechoslovak Chemical
Communications, No 9, 1962, pp 2193-2200

"Proteinases of the Ehrlich Ascites Tumour. II
Separation of Proteinases of the Ascites Fluid
and Ascites Cells."

KEILOVA, H.; KEIL, B.

Proteinases of the Ehrlich ascites tumor. Part 1: Basic characterization of the proteinases and their dependance on the growth of the tumor. Coll Cz Chem 27 no.9:2186-2192 S '62.

1. Institute of Organic Chemistry and Biochemistry, Czechoslovak Academy of Sciences, Prague.

KEILOVA, H.; KEIL, B.

Proteinases of the Ehrlich ascites tumor. Part 2: Separation of proteinases of the ascites fluid and ascites cells. Coll Cz Chem 27 no.9:2193-2201 S '62.

1. Institute of Organic Chemistry and Biochemistry, Czechoslovak Academy of Sciences, Prague.

KEIL, B.; KEILOVA, H.; BARTOSEK, I.

On proteins. Part 80: Column extraction of proteins. Coll Cz
Chem 27 no.12:2940-2945 D '62.

1. Institute of Organic Chemistry and Biochemistry, Czechoslovak
Academy of Sciences, Prague.

KEIL, B.; PRUSIK, Z.; MORAVEK, L.; SORM, F.

On proteins. Part 81: The disulfide bonds of α -chymotrypsinogen and peptides from its peptic hydrolysate. Coll Cz Chem 27 no.12: 2945-2955 D '62.

1. Institute of Organic Chemistry and Biochemistry, Czechoslovak Academy of Sciences, Prague.

KEIL, B

CZECHOSLOVAKIA

MELOUN, B; KOSTKA, V; KEIL, B; SOMI, F.

Institute of Organic Chemistry and Biochemistry of the
Czechoslovak Academy of Sciences, (Prague (for all)

Prague, Collection of Czechoslovak Chemical Communications,
No 10, 1963, pp 1749-2777

"On Proteins. LXXXIII. Peptides Isolated from the Peptic
Digest of the Part of a Tryptic Hydrolysate of S-
Sulpho-Chymotrypsinogen Insoluble in Acid Environment."

(4)

On proteins. Pts. 83-84. Coll Cz Chem 28 no.10:2749-2805 0 '63.

1. Institute of Organic Chemistry and Biochemistry, Czechoslovak
Academy of Sciences, Prague.

STOKROVA,S.; KEIL,B.

A study of the course of tryptic hydrolysis of human serum albumin. Coll Cz Chem 28 no.11:2864-2873 N'63.

1. Institute of Organic Chemistry and Biochemistry, Czechoslovak Academy of Sciences, Prague (for Keil). 2. Institute of Chemical Technology, Department of Physical Chemistry, Prague (for Stokrova).

DLOUHA, V.; KEIL, B.; SORM, F.

On proteins. Pt. 85. Coll Cz Chem 28 no. 11: 2969-2976 N'63.

1. Institute of Organic Chemistry and Biochemistry, Czechoslovak Academy of Sciences, Prague.

ZMRHAL, Z.; JEGOROV, C.; KEIL, B.

Proteins. Pt. 87. Coll Cz Chem 29 no.4:943-952 Ap '64.

1. Institute of Organic Chemistry and Biochemistry,
Czechoslovak Academy of Sciences, Prague.

KRATO, B.; KMILOVA, H.

On proteins. Pt. 90. Coll. Cr. Chem 29 no.9:2206-2215 3 '64.

1. Institute of Organic Chemistry and Biochemistry, Czechoslovak Academy of Sciences, Prague.

KRATOVA, H.; KELL, B.; SORM, F.

Releases of Ehrlich ascites tumor. Pt. 3. Coll. Cz. Chem 29 no.9:
2216-2222 S '67.

1. Institute of Organic Chemistry and Biochemistry, Czechoslovak
Academy of Sciences, Prague. 2. Chairman, Advisory Board, "Collection
of Czechoslovak Chemical Communications" (for Sorm).

KARADZHOVA, M. [Karadzhova, M.]; NEDKOV, P.T.; ATANASOV, B.; KELL, B.

On proteins. Pt.86. Coll Cz Chem 29 no.2:551-556 F '64.

1. Institute of Organic Chemistry, Bulgarian Academy of Sciences,
Sofia and Institute of Organic Chemistry and Biochemistry,
Czechoslovak Academy of Sciences, Prague.

JEGOROV, G. [Yegorov, GS.]; KEIL, B.; SORM, F.

On proteins. Pt.92. Coll Cz Chem 30 no.1:105-117 Ja '65.

1. Institute of Organic Chemistry and Biochemistry of the Czechoslovak Academy of Sciences, Prague. 2. Permanent address: Institute of Natural Substances of the Academy of Sciences of the U.S.S.R., Moscow (for Jegorov). 3. Advisory Board Chairman, "Collection of Czechoslovak Chemical Communications" (for Sorm). Submitted February 5, 1964.

KEILOVA, H.; KELL, B.

Proteinases of Ehrlich ascites tumour. Pt. 4. Coll Cz Chem 29 no.
9:2272-2276 S '64.

1. Institute of Organic Chemistry and Biochemistry, Czechoslovak
Academy of Sciences, Prague.

DLOUHA, V.; KELL, B.; SORM, F.

Structure of the peptides isolated from the tryptic hydrolysate of the chain of edestin. Coll Cz chem 29 no.8:1835-1850 Ag '64.

1. Institute of Organic Chemistry and Biochemistry, Czechoslovak Academy of Sciences, Prague. 2. Chairman, Advisory Board, "Collection of Czechoslovak Chemical Communications" (for Sorm).

FRANEK, F.; KEIL, B.

Structural differences between gamma-globulin chains. Coll
Cz Chem 29 no. 3:847-849 Mr '64.

1. Microbiological Institute and Institute of Organic Chemistry
and Biochemistry, Czechoslovak Academy of Sciences, Prague.

CZECHOSLOVAKIA

KEIL, B.

HELXOVA, L; KOPEC, Z; KEIL, B

1. Institute of Chemistry, Slovak Academy of Sciences, Bratislava - (for ?); 2. Institute of Organic Chemistry and Biochemistry, Czechoslovak Academy of Sciences, Prague - (for ?)

Prague, Collection of Czechoslovak Chemical Communications, No 2, February 1967, pp 678-684;

"Isolation and certain properties of wheat β -amylase."

APPROVED FOR RELEASE: 06/13/2000, H. CIA-RDP86-00513R000721420009-6"

Pour point depressants in transformer oils. Ropa a uhlie 6 no.10:
291-296 0 '64.

SAXE, H.; MILOWSKY, L.; KEIL, G.

Evaluation of used engine oils. Ropa a uhlie 6 no.10:314-317
0 '64.

1. Institute of Fuels, Freiberg, German Democratic Republic.

KEIL, Gerhard, dipl. chem.; MENZEL, N.; APEL, W.

Oxidation resistance of lubricating oils. Ropa a uhlie 6 no.3;
232-236 Ag '64.

1. Research Worksite, Mineralolwerk National Enterprise, Lutzkendorf,
German Democratic Republic.

Feb. 5

1. *Phragmites australis* (Cav.) Trin. ex Steud.

19. p. 12. (Zememerictvi. Praha. Vol. 4, no. 5, May, 1954)

East
 64. Middle East / American Assembly (1941), 20, 21, 22, 23.
 June 1941, Vol.